Name: _____ Date: _____

4.2 Fractions, Decimals, and Percents

MathLinks 8, pages 130–137

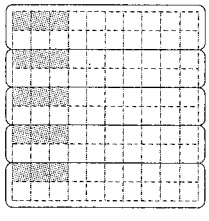
Key Ideas Review

Choose from the following terms to complete each statement.

decimals division fractions hundred grid hundred grids multiplication

1. You can convert fractions to decimals using a _____ _____ or _____.

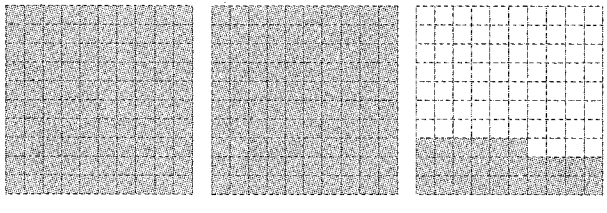
   For example:

   $\frac{3}{20}$ =  or _____

   $\frac{3}{20} = 3 \div 20 =$ _____

2. You can convert decimals to percents using _____ _____ or _____.

   For example:

   2.26 =  = _____

   $2.26 = 2.26 \times 100\% =$ _____

3. Percents can be written as _____ and as _____.

Practise and Apply

4. Rewrite each fraction as a decimal and a percent. Show your thinking.

   a) $\frac{3}{4}$ = _____ or _____

   b) $\frac{21}{300}$ = _____ or _____

   c) $\frac{9}{5}$ = _____ or _____

   d) $\frac{1}{8}$ = _____ or _____

   e) $\frac{3}{80}$ = _____ or _____

Name: _____ Date: _____

5. Convert each decimal to a percent and a fraction in lowest terms. Show your thinking.

a) 4.25

b) 0.845

c) 0.0062

6. Convert each percent to a decimal, then a fraction. Show your thinking.

a) 735%

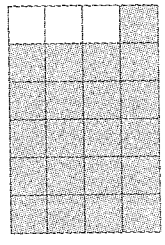
b) $16\frac{1}{2}\%$

c) 0.6%

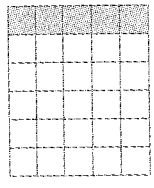
7. Tristan charges a flat rate of $16 for each small lawn that he mows. He decided to increase his rate to $20. What is the new rate as a percent of the old rate? Show your thinking.

8. If one completely shaded grid represents one whole, express the shaded portion of each diagram as a fraction, a decimal, and a percent.

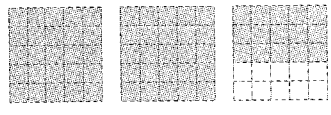
a)



b)



c)



9. About 0.038% of Earth's atmosphere is carbon dioxide. Write this amount as a decimal and a fraction.

10. Kenji calculated that he needed to eat about 2000 calories per day based on his weight, age, and activity level. For lunch, he ate a hamburger that had 538 calories. What percent of Kenji's daily calorie needs does this hamburger represent? Show your thinking.

Name: _____ Date: _____

4.3 Percent of a Number

***MathLinks 8*, pages 138–143**

Key Ideas Review

1. Label each example with the mental math strategy it represents: halving, doubling, or dividing by ten. Then, complete the calculation.

a) 1% of $66

10% of $66 = $6.60

So, 1% of 66 = $ ☐ _____

b) 5% of 180

10% of 180 = 18

So, 5% of 180 = ☐ _____

c) 20% of $3.20

10% of $3.20 = $0.32

So, 20% of $3.20 = $ ☐ _____

2. Circle the terms that correctly complete this statement.
To calculate the percent of a number, write the percent as a (decimal/fraction), and then (divide/multiply) by the number.

Practise and Apply

3. Use mental math to determine each of the following. Show your thinking.

a) 200% of 4500

b) 0.1% of 600

c) $1\frac{1}{4}$% of 80

d) 30% of 70

e) $\frac{4}{5}$% of 15

f) 450% of 300

Name: _____ Date: _____

4. What is the percent of each number? Give your answer to the nearest hundredth.

a) $\frac{1}{5}$% of 630

b) $23\frac{7}{8}$% of 300

c) 245% of $356.80

d) $68\frac{3}{4}$% of 730

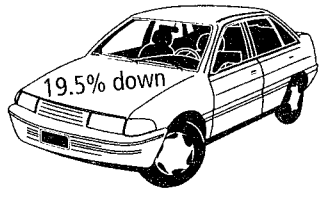
e) 360% of $129.95

5. The commission for the sale of a house was $6\frac{3}{4}$%. If the house sold for $345 000, how much was the commission? Show your thinking.

6. Table salt is a chemical compound of sodium and chlorine. Recommended daily intake is about 1700 mg. If Canadians consume 182% of this amount on average, how much sodium is one person eating daily?

7. Estimate the following answers, then calculate. Show your thinking.

a) Miguel bought a car for $4700. He made a down payment of $19\frac{1}{2}$%. How much was the down payment?



b) About 5.6% of Canadians have Type 2 diabetes. If Canada's population is 32 million, about how many Canadians have this condition?

c) The 4900-seat hockey arena was 63% full. How many people were at the game?

8. The Nile River is about 209% the length of the Yukon River. If the Yukon River is 3168 km, how long is the Nile River (to the nearest km)? Show your work.